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**Before the
Federal Communications Commission
Washington, D.C. 20554**

FCC 96-93

In the Matter Of)
)
Federal-State Joint Board on)
Universal Service)
)

CC Docket No. 96-45

**Comments of the
Rural Utilities Service**

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Introduction

The Rural Utilities Service (RUS) appreciates the opportunity to offer comment to the Commission and the Joint Board on the issue of Universal Service.

The Telecommunications Act of 1996 (hereinafter called the Act) creates a regulatory environment which will bring the exciting possibilities of competition to local telecommunications services across the nation. Telecommunications competition is good, it will provide choice, lower prices, and improve service. But competition will not come to all parts of the nation at the same time and may never come to some. Great distances and small populations may mean that rural areas may receive the benefits of competition later rather than sooner. Congress recognized this and provided the universal service safety net provisions of Section 254 so that all Americans would have an opportunity to contribute to our nation's future.

The RUS (formerly the Rural Electrification Administration) is a rural development agency of the U.S. Department of Agriculture that has promoted universal service in rural America for 48 years through targeted lending, technical support and policy guidelines. RUS telecommunications borrowers provide service to 40 percent of the landmass of the country, which is roughly half of the rural portions of the continental United States. Comprising 80 percent of the landmass, but only 20 percent of the population, rural America needs modern telecommunications to share in the "age of possibility" our nation is entering. By bringing high quality education, health care, and commerce to rural families and businesses, telecommunications frees the rural population from limitations of time and space.

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RUS is in a unique position to comment on rural America's telecommunications needs. The Agency's goal has always been to provide every rural household with affordable service. Our point of reference is the urban and suburban subscriber. We have sought to ensure that RUS borrowers provide telecommunications service that works like, sounds like, and costs like the urban and suburban customers' service. Since this is much harder to do in low density areas, RUS has created its own practices and standards which addressed the rural challenges. RUS seldom has enough loan funds to finance every good proposal, so it stretches available funds by examining costs and system designs at every stage. Every telecommunications loan proposal is subjected to an engineering evaluation. Once a loan is made, the RUS reviews construction plans, evaluates construction costs, and confirms that the construction performed will accomplish the purposes of the loan. RUS-financed systems are designed to be expandable and upgradable to meet rural America's needs economically throughout the anticipated economic life of the plant installed.

These comments address all of rural America, not just those portions served by RUS borrowers. Although RUS has an outstanding portfolio of approximately \$5.2 billion in loans outstanding or guaranteed, and RUS does have a concern about loan security, the overriding issue is the health, education, and economic condition of all of rural America. And as in the past, we are technology neutral and favor any technology that will economically establish and maintain universal service, be it wireline, wireless, or satellite.

When discussing competition in these comments, RUS assumes that in any area where competition exists, it is because a state PUC has determined it is in the public interest pursuant to Subsection 251(c) of the Act.

The Notice of Proposed Rulemaking (Notice) raises many issues. Perhaps the most daunting issue is the creation of a mechanism to equitably and adequately distribute universal service support funding to eligible telecommunications carriers for ensuring stated universal services.

The Universal Service Support Mechanism

The Challenge

In the Notice, the Commission seeks comments about how to distribute universal service support -- and for what. In RUS' view, this issue is central to the Notice, and the other important questions raised can be answered after the initial structure has been established. The redirection of the existing universal service funding mechanism is important, but it is indelibly linked to a refocusing of the separations rules, as suggested in paragraphs 39 and 40 of the Notice. RUS suggests that all cost sharing mechanisms in today's

environment be considered in concert for high cost local exchange providers, and that the redesign of one system recognize possible changes in the others.

Two new methods of setting appropriate support distribution levels to eligible telecommunications carriers are referred to in the Notice: bidding, and costing models. The obvious approach is to compare these possible distribution mechanisms with the system of high cost support that exists today. But RUS believes a better method of evaluating these and any other new distribution mechanisms may be to establish a test which defines the desired outcome and measures the suggested mechanisms.

A successful universal service support mechanism will achieve the principles in Sections 254(b) and (c), and will, wherever possible, promote other objectives of the Act. RUS has developed a five prong test (the RUS Test) which we believe a successful universal service support mechanism should meet.

The RUS Test

A successful mechanism would:

1. Provide incentives for competition. The mechanism must encourage competition and provide incentives to attract new entrants. It should not, however, artificially support competition in a manner that cannot sustain multiple universal service providers.
2. Provide an adequate safety net. The mechanism must ensure that rural citizens can receive services of like quality, type, and performance as typical urban or suburban citizens.
3. Provide for a changing infrastructure. The mechanism must be flexible enough to maintain good, improve inadequate and serve the unserved with universal service infrastructure, whether wireline, wireless or satellite. All facilities must be cost effective and capable of evolving - migrating - to meet the changing definition of core services, and must not inhibit the evolution to advanced services.
4. Provide affordable service. The mechanism must ensure that core services are affordable both in monthly charge and initial service connection cost, anticipating possible revenue losses from new entrants.
5. Do no harm. The best parts of the rural infrastructure are a national treasure. The new mechanism should not dismantle the good parts of what has taken so long to build.

Applying the Test to Current and Suggested Mechanisms

To see whether and how a test like the RUS Test could work, below RUS applies this test to the three support mechanism referenced in the Notice: the current system, a subsidy-

based system of bidding to establish support level, and a subsidy-based system using a costing model of establishing support.

RUS does not use the terms subsidy and incentive interchangeably. A subsidy is a payment of money, but an incentive is a lure to attract a desired effect. Profitable local exchange carriers may not need a subsidy to serve high cost areas in a competitive environment, but they are more likely to commit to serving the high cost areas if there is adequate incentive. For those rural areas that can support competitive service providers, an incentive-based support system can help accomplish competition. But a subsidy-based or penalty-based system might not. RUS notes that the Act does not use the word “subsidy” in Section 254.

1. The existing Universal Service Fund, which operates in parallel with the toll separations process. The existing mechanism is considered only to establish a baseline for comparison.

The existing mechanism fails prong number 1 in several ways. It was not designed to function in or support a competitive environment. It is an incentive based system but the incentives are based on investing in certain types of plant, not on providing core or education and health care services.

This mechanism also fails prong number 2. It has not resulted in the provision of universal service to all who request it. Because no core or other services have been specified, the service provided more-or-less universally in rural areas is not of like quality or performance to that provided to urban and suburban subscribers. (This will be elaborated upon later.) Also, large local exchange carriers which serve both urban and rural areas can receive support for the latter from the existing mechanism and do not have to use that support specifically in their high cost service areas.

This mechanism fails prong number 3. It does not encourage cost effective plant design. It does not encourage the building of plant that can migrate upward in capability as subscribers service needs evolve. It is a cost-based system which is essentially blind to the functionality of the plant it supports.

This mechanism fails prong number 4. State regulation of local service rates is the only assurance of affordability that currently exists. The current mechanism facilitates affordable universal service in high cost areas, but does not ensure it. The current mechanism falls especially short of meeting affordability criteria with regard to educational, library and rural medical service providers. RUS, and the many rural educational interests we work with, have identified the cost of telecommunications services in general, and availability of toll-free access to information services in particular, as a major barrier to comparability for rural schools and libraries and their urban and suburban counterparts. Likewise, rural health care providers need reasonably priced, high-speed information transfer capabilities to provide a level of care that is at least fairly comparable to that available in urban areas.

This mechanism may pass prong number 5, but that might depend on one's perspective. From the RUS perspective, the existing system deserves part of the credit for establishing the substantial provision of universal service that exists in rural areas today.

2. A mechanism using bidding to establish support levels, as is discussed by the Commission in paragraphs 35 through 37. This mechanism would use a competitive process to establish the levels of assistance needed to support universal service in an area.

This mechanism fails prong number 1. It may encourage new entrants, but this may not really be an incentive-based system. It is predicated upon finding a lowest common denominator of facility and service levels that subscribers would tolerate. It would seem to encourage an unsustainable environment by providing the "successful bidder" with a bonus for setting that low level.

Normally, the essence of competitive bidding is that the successful bidder alone has to live with its bid. Other bidders walk away. This provides an incentive for a bidder to bid aggressively, but it does not offer profit to a bidder to "lowball" bid a project. Another characteristic of competitive bidding is that it relies very heavily on a statement of work, and the ability to enforce that statement of work. The statement of work in this mechanism would be the established core services and any other services, and the affordability level required. This would put great pressure on those enforcing that statement of work, much more pressure than is already on the state commissions under the existing mechanism.

In addition, RUS is concerned that it might encourage mischief by enabling a large, financially sound service provider to "knock out" a smaller carrier by significantly underestimating the cost of providing service, thereby driving out the smaller competitor and leaving the larger competition free to raise prices later. This raises issues of unfair competition and predatory pricing. The larger carrier might be rewarded for doing this under the process described in paragraph 36.

This mechanism fails prong number 2. The mechanism does not provide an incentive to eligible telecommunications carriers to provide services comparable to those provided in urban and suburban areas. It is predicated upon a lowest common denominator approach to plant and service levels. Only energetic enforcement of the requirements for universal services, the above-mentioned statement of work, would ensure that rural citizens are equitably served.

This mechanism fails prong number 3. This subsidy-based mechanism would be inflexible. Again, its tendency to seek the lowest common denominator of facility and service levels would make it very unattractive for an eligible telecommunications carrier to build plant capable of supporting evolving universal service levels.

This mechanism fails prong number 4. Low cost and perhaps affordability would be the strong points of this mechanism. But its support level inflexibility could cause rates to skyrocket if the successful bidder has not agreed to a long-term set rate and the area attracts a new entrant.

This mechanism fails prong number 5. As stated above, the potential for displacement of successful rural universal service providers is significant. The possibility of incentive for unfair competition and predatory pricing might lead to the dislocation of other competitors, like small companies and cooperatives.

3. The BCM cost model to establish support levels. This mechanism, described in paragraphs 31 through 34, uses a costing model to establish subsidy levels necessary to provide service in every area of the United States. RUS has evaluated the Benchmark Cost Model (BCM) prepared by the Joint Sponsors, and finds that it does not meet the RUS Test.

This model fails prong number 1. The BCM is a subsidy-based system, which would not attract new entrants or encourage competition.

This model fails prong number 2. The BCM does not reflect the diversity and challenges of many rural areas and would rely heavily on enforcement mechanisms for ensuring service comparability with urban and suburban areas.

The adequacy of the safety net depends on the applicability of the model to the area. In the RUS review of the BCM, we find that most of the assumptions which form the foundation for the model do not adequately address the challenges for the rural areas which most need a safety net. The BCM assumptions are appropriate for urban, suburban and higher density rural areas in the nation, but sparser rural areas just don't follow generalized rules. The geography and population dispersement changes from area to area and is linked to the high cost issue. The BCM does not have flexibility to approach this issue. Uniformity and predictability are necessary in large scale modeling, but they are not found in most rural areas.

This model fails prong number 3. The BCM does not inherently provide for evolution of core services, and has the added problem being technology specific. On the positive side, it would encourage cost effectiveness in system design.

This model fails prong number 4. The BCM sets a level of support and is not sensitive to the need for support to maintain rate comparability. Affordability of universal service could be threatened by new entrants and the BCM has no built-in way to adjust support. Otherwise, the mechanism's tendency to support cost effective system design would help encourage affordability.

This model fails prong number 5. As presented, considering the inapplicability of the BCM to areas with very low densities, this model would fail to provide adequate support for low density, high cost rural areas.

An Alternative Mechanism

RUS believes that none of the three mechanisms tested would meet the RUS Test, and arguably would not meet the universal service principles set forth in the Act. Of the three examined mechanisms, the costing model approach appears to offer the most potential.

RUS believes that the problems in the BCM can be overcome, and that a mechanism using model-derived support levels could work. A costing model-based support mechanism could be designed which:

1. Applies a well designed costing model to urban, suburban and higher density rural areas. This costing model would be based on facilities which could easily migrate to meet the evolving nature of universal service, and not inhibit a provider's own desire to provide advanced services, as opposed to facilities which cannot migrate to newer core service levels;
2. Offers an alternative to the national costing model for lower density areas, and other areas with exceptional characteristics;
3. Uses a costing model that is based on all applicable local service technologies; and
4. Sets the scale of support at amounts higher than the amounts computed by the BCM, perhaps on a nonlinear scale, to make pro-competitive incentives.

This modified model-based mechanism passes the RUS Test as follows:

1. The mechanism passes prong number 1. Changing from a subsidy-based to an incentive-based mechanism could allow the mechanism to attract new entrants and incubate competition. Profitable carriers could earn equivalent profits in high cost areas.
2. The mechanism passes prong number 2. A safety net has to provide protection to those most likely to need it, and those are the hardest areas for a costing model to fit. The change to allow using something other than the national model enables the mechanism to pass this test. This prevents a search for the lowest common denominator plant design.

For high cost and low density areas where the national model is inapplicable state commissions, or the Commission, or the neutral Fund Administrator could determine the appropriate supportable basis cost, perhaps with the assistance of special consultants. If none of these work, some other method could be designed.

Constructing a technology-neutral costing model is important, but given the current state of technologies, incorporating them into one model may produce a model which would average of the costs of all technologies, i.e. wireline, wireless, or satellite. Support based

on such a single model might not create a level playing field for a specific technology. It may be preferable to create cost models that are technology-specific, and use the appropriate model for a specific eligible telecommunications carrier.

3. The mechanism passes prong number 3. The redesign of the costing model is the key to meeting this test. The RUS-suggested model would be based on design assumptions that facilitate migration toward evolving services, rather than plant that is capable primarily of supporting current core services. Anything less would inhibit the evolution of universal service.

Because the RUS-suggested model is technology neutral, and because the mechanism is now incentive-based, new entrants who might offer services based on different technologies might be lured into the market. Although wireline, wireless and satellite technologies will all provide telecommunications services, each will have certain performance advantages over the others. These differences should be encouraged because they enhance the flexibility of the overall infrastructure.

The mechanism would be designed to discourage excessively high cost plant designs by tapering off support levels at some threshold percentage above the costing model or other accepted basis cost level.

4. The mechanism passes prong number 4. In response to the inability of the other tested mechanisms to ensure affordability, the alternative mechanism would have a specific sensitivity to affordability and the need for varying levels of support. Under certain circumstances, such as in the presence of a new entrant, the mechanism could attend to that need.

5. The mechanism passes prong number 5. The existing infrastructure providing universal service would continue to be supported adequately, and there should be no ground lost from universal service.

RUS Comments on Other Issues

RUS suggests that an outcome-based test such as the RUS Test be used to guide other issues posed in the Notice. Decisions such as core service levels and whether to extend the Universal Service Fund cap should be consistent with the outcome desired for the model. All prongs of the RUS Test may not apply to each of the following issues, but wherever applicable, RUS applies this Test to the following comments.

Services Supported

In paragraphs 4, 5, 6, and 9 of the Notice, the Commission discusses the universal service principles set forth in Act subsections 254(b)(1), (2), and (3), and four evaluation criteria of services which might meet these principles.

RUS supports the Commission's interpretation in paragraph 9 that universal service support can be provided for services which do not meet all four criteria. This interpretation would allow useful services such as touch tone dialing to be included as a core service, when it would be difficult to argue that it meets criterion (A), "[is] essential to education, public health, or public safety."

Of the four criteria in the Act, the most difficult to meet is subsection 254(c)(1)(B), "[has] through the operation of market choices by customers, been subscribed to by a substantial majority of residential customers." If the Commission's interpretation as stated in paragraph 9 of the Notice is not applied, then the core service levels selected would be exactly those subscribed to by the substantial majority, without variance.

Core Services

The core services and clarity with which they are defined will determine exactly what kinds of telecommunications services will be available to rural and low income users. If the bar is set too low, those users will never have service that is reasonably comparable to their urban and suburban counterparts. If the bar is set too high, the demands on the funding resources will be excessive and the mechanism won't last.

RUS supports all five elements which the Commission suggests in paragraph 16 of the Notice for defining core services. In addition, RUS offers two other core services for consideration.

Core services should include the following seven services:

1. Voice grade access to the public switched network, and
2. Single party service

There can be no question that voice grade access to the telecommunications network is the essence of the telecommunications service which the Act intends to make universal. It is the foundation on which all telephone service has been built and will remain essential in the foreseeable future.

But the nature of that voice service must be defined. RUS believes that single-party service is inseparable from a contemporary description of voice service. One-party service is provided to nearly 98% of American households. Without one-party service, control of the phone line becomes a contest between subscribers. The on-demand uses

that a typical subscriber makes, access to dialtone, long personal calls, and uninterrupted sessions of Internet access, are denied a subscriber without single-party service.

A complete definition of single-party voice grade access must also include the characteristics that are intrinsic in its provision to the overwhelming majority of subscribers. Without these characteristics, rural service cannot be reasonably comparable to that provided in the rest of the nation.

One such characteristic is the ability to support digital transmission at contemporary (28.8 kb/sec.) rates through modems. Modems have become indispensable for personal computers use, especially for connection to the Internet. It is estimated that there are 10 million modem-equipped computers and that modem use of voice grade service is growing at over 20% per year (Business Week, April 1, 1995). The European Community has recently expanded its definition of universal service to include modem capability.

Current ITU standards, such as V.34, allow transmission of data at 28.8 kb/sec. These standards are based on typical loops and standard digital transmission systems. "Typical" loops are the short loops (less than 18,000 feet) that comprise the overwhelming majority in suburban and urban areas. It should be noted that the design assumptions in the Benchmark Cost Model by the Joint Sponsors are predicated upon short loops. Although most rural loops built today are short, some long, loaded loops remain and these loops cannot transmit data at modern rates. This and the cost of toll access discussed below may account for the 13% lower penetration of modems in rural households.

3. Touch-tone dialing. Tone dialing is widely and increasingly used for consumer, business, and government services. In digital exchange switches, tone dialing is easier to provide and more economical in its use of central processor time than pulse dialing. In fact, the custom of charging extra for tone dialing dates back to the era of electromechanical switches when auxiliary tone to pulse converters were necessary.

4. Access to emergency services (911 and E911). RUS agrees that access to emergency services is essential to public health and safety. This is especially true in rural areas where distance means extra time for police, fire, ambulance, and other emergency vehicles. The time savings provided by 911 services may literally mean the difference between life and death.

5. Access to operator services. Access to operator services is indispensable and in the public interest, convenience and necessity. It is especially important that as technologies and services proliferate, there remain a human contact point for emergencies and assistance.

Without all five of these services, the core services will fail prongs 2, 3 and 5 of the RUS Test. Without the performance characteristics which RUS suggested be part of voice grade service, the core services will fail prong 2 of the RUS Test by failing to ensure that

rural citizens receive services of like quality, type and performance as the typical urban or suburban citizen.

In addition to the above five services, RUS suggests two additional core services:

6.. Elements of the competitive checklist. Subsection 271(c)(2)(B) of the Act requires certain services of every Regional Bell Operating Company before it can provide interLATA services. RUS believes there are some service elements in this checklist that should be made part of core services. For example, customers should be able to expect a white pages listing on a non-discriminatory basis even if service is provided by another carrier. Since these services are very likely to apply to all RBOCs, they should meet the substantial majority subscription criterion of the Act. RUS suggests that the Commission consider the services in this checklist for inclusion in core services. Without applicable elements from this competitive checklist, the core services will fail prongs 1 and 2 of the RUS Test.

7. Toll blocking and toll limiting services. In paragraph 54 of the Notice, the Commission seeks comment on whether toll blocking or toll limiting services should be made core services for low income subscribers. RUS suggests that these services be made part of core services for all subscribers. Rural subscribers have smaller calling areas than urban and suburban subscribers, and more of their calls are likely to be toll calls. Also, toll charges for connection to non-local information services can accumulate quickly. Without this feature, affordability is threatened and the core services will fail prong 4 of the RUS Test.

RUS offers one additional core service issue for the Commission's consideration.

In paragraphs 14 and 23 of the Notice, the Commission seeks comment on how to address the Act principle that “[c]onsumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high-cost areas, should have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services’ that are reasonably comparable to those provided in urban areas and at reasonably comparable rates.”

Through RUS’ experience with issues relating to the National Information Infrastructure (NII), its Distance Learning and Telemedicine Grant Program, and the concerns of rural Americans, RUS has observed that a great barrier to rural use of Internet and other information services is the lack of a local service provider and cost of toll calling to reach those services. The hourly charge, above the base usage rate, for Internet access can be \$3-4, but the hourly charge for toll usage to reach that Internet access point could be at least several times that amount. RUS believes that rural use of Internet and other information services may never approach urban and suburban levels of use until availability of access on a non-toll basis is provided.

Urban and suburban customers typically have local access to Internet and other information services, but that is a characteristic of their service area and often not a specific telecommunications service feature. If a way could be found through this proceeding to provide rural America with non-toll availability of Internet access to citizens, the impact would be profoundly felt. In fact, many local exchange carriers (including rural independents and cooperatives) and some interexchange carriers are providing local call access or have announced plans for offering local call monthly Internet service -- but not all have.

In paragraph 66 of the Notice, the Commission asks how and with what frequency the initial list of services adopted in this proceeding should be evaluated. RUS suggests that the first reexamination of core services be performed fairly early in the life of the new mechanism, perhaps within 3 or 4 years from the date the core services are selected (rather than from the date of implementation of the mechanism). This would give the Commission the opportunity to adjust the results of this first core service selection. The operation of the support mechanism may show some unexpected results, and changing the core service levels supported could improve its performance. Reexamination should occur thereafter at least every 5 years.

Advanced Telecommunications Services for Schools, Libraries, and Rural Health Care Providers.

In response to paragraph 73, universal service support for schools, libraries, and rural health care providers must promote improved education throughout the nation and health care opportunities in rural areas. In many rural communities, small student population bases and limited medical facilities are a challenge to educators and health care providers. The RUS administers a Distance Learning and Telemedicine Grant Program and has leveraged 90 projects in 39 states over the past three years. But universal access to these services is hampered by the lack of advanced telecommunications infrastructure.

Based on our review of hundreds of applications for distance learning and telemedicine projects, RUS knows that the following services are requested by a substantial majority of applicants:

For **educational** institutions:

- Full motion, interactive video service using point-to-point, point-to-multipoint, or multipoint-to-multipoint network configurations.
- Access to information services (such as the Internet) outside the ordinary toll system.

For rural **health care** institutions:

- Local dial-up Internet and Electronic Mail access.
- Real-time full motion video access to multiple major urban medical centers.

The educational and health care telecommunications services cited would help rural citizens obtain educational and health care services comparable in quality and access to those received by urban and suburban citizens. The services cited would support the rapidly evolving capabilities of education, medicine and libraries. And affordability is a key issue for these advanced services. The Act requires discounts or cost comparability for these services. Without support, rural schools, libraries and medical facilities cannot readily afford these services today.

Defining “Rural”

With regard to the definition of “rural” raised in paragraphs 95-98 of the Notice, RUS suggests that the Commission consider adopting a definition that is consistent with the common meaning of rural and is based on an objective, established standard which has gained widespread acceptance. RUS believes that the ERS-RUC classification system mentioned in paragraph 97 meets these criteria and also meets the Commission goal of adopting an easily-administered methodology based on publicly available data that is neither over- nor under-inclusive.

A single measure, such as population in an incorporated area, is not appropriate for this purpose. For example, medical service providers are usually located in incorporated areas though they serve the wider rural area.

The rural-urban continuum (RUC) scale devised by the United States Department of Agriculture’s Economic Research Service (ERS) has been useful in administering the RUS Distance Learning and Telemedicine Grant Program. The ERS-RUC employs nine categories of counties based on two criteria: (1) each county’s aggregate urban population, i.e., the total of cities, towns, villages or other incorporated areas of 2,500 or more; and, (2) the proximity to metropolitan counties. Under this system, counties are not classified based on their total population as paragraph 97 suggests, but by the aggregate of their urban population. ERS-RUC codes 0-3 classify urban counties and codes 4-9 indicate non-metropolitan counties, or rural areas.

Also, the Office of Rural Health Policy of the Health Resources and Services Administration (HRSA) possesses data on rural health care institutions which may be helpful to the Commission as it crafts appropriate guidelines. The Commission may wish to note HRSA’s comments regarding appropriate refinements to the ERS-RUC method.

The ERS-RUC passes prongs 2 and 4 of the RUS Test by helping determine which citizens need the safety net of universal services, and it fairly determines areas needing support to obtain affordable advanced services for their health centers.

Affordability Considerations

In paragraph 25, the Commission seeks comment on defining affordability. RUS agrees that affordability and comparability mean the same thing as long as the quality and quantity of services are comparable. The intent of the Act is clear. The first universal service principle is “Quality services should be available at just, reasonable, and affordable rates.” The third principle further defines “just, reasonable, and affordable” by saying services should be available “at rates reasonably comparable to rates charged for similar services in urban areas.”

In paragraph 26, the Commission seeks comment on whether support should be based on achieving specific end user prices. Rate comparability is a goal of the support mechanism, so specific end user prices for like services that are reasonably comparable to those in urban and suburban areas must be a determinant of support levels. The support mechanism should also be able to adjust support levels if end user pricing is forced to increase because an eligible telecommunications carrier in a rural area loses revenues as a result of new entrants.

RUS offers one other issue for the Commission’s consideration. Two traditional local service pricing structures, usage-sensitive and distance sensitive, may affect affordability for some subscribers. In a competitive market, eligible telecommunications carriers could use either of these pricing structures and customers could choose the structure, and carrier, that best suited their needs. But in an area served by only one eligible telecommunications carrier, usage- or distance-sensitive pricing of universal service could frustrate rate comparability. RUS believes that local service pricing structures could impede a mechanism from passing both prongs 2 and 4 of the RUS Test.

Benchmark Costing Model

In paragraphs 31 and 32 the Commission requests comments regarding the Benchmark Costing Model (BCM) developed by Joint Sponsors. The BCM is a costing model which could be used to estimate an appropriate cost to serve an area. Its purpose is to provide an objective method of determining the amount of support an area would require.

The function of a model is to simplify a process and the challenge is to make it apply to all instances where the process must be performed. To simplify a process, the first step is to make assumptions to reduce the number of variables. These assumptions form the foundation of the model. If they do not hold true for a specific process, the model will not provide an accurate result.

The Joint Sponsors provided the model assumptions in the BCM. RUS has evaluated the assumptions and found that they appear appropriate for the areas where the majority of telecommunications subscribers live and work, but they are not a good match for the sparser rural areas, and much of the rural 80 percent of the nation's landmass. RUS offers the following comments on the BCM assumptions:

- The fundamental assumption of the BCM is that households are evenly distributed throughout a Census Block Group. This is a good assumption for high density areas, but in low density areas households usually are unevenly distributed throughout the area. Many other BCM assumptions and costing algorithms are predicated on this assumption.
- All of the other BCM system architecture assumptions, and many pricing algorithms, are based on this assumed homogeneity of rural America. Two telephone systems with equal density can have drastically different costs-to-serve, based on whether subscribers are clumped or evenly distributed. Many of the highest cost companies have the highest densities (typically 20 to 40 subscribers per route mile of plant) - because terrain is so harsh that it forces inhabitants to cluster in more hospitable areas. Examples are exchanges such as the Alaskan villages, canyon areas in the Rocky Mountains, and along the bayous in Louisiana.
- The BCM assumptions for loop technologies are reasonable, and are the ones applied by RUS (although the BCM states that these assumptions are only applicable to areas with densities *greater than 5 HH/sq. mi.*). RUS-financed companies and cooperatives are similar to the BCM model in designing outside plant bring an electronic interface with a broadband facility to at least within 18,000 feet of the subscriber.
- The BCM pricing assumption for switching equipment is not applicable to sparser rural areas. In CC Docket 20-286 RUS commented on the assertion that switching costs were linear. We presented a graph showing our experience with switching costs. Briefly, we demonstrated that switching costs are not linear for smaller switch purchases. In reviewing the BCM, we see the assumptions necessary to find that switch costs are linear. The BCM assumes a common equipment cost per switch of \$647,526 and a per line cost of \$238.87. In our experience, most rural exchange switches cost less than \$647,526.
- Under "Density Assumptions," it is stated that Census Block Groups with densities greater than 850 HH/sq. mi. are considered urban, and CBGs with densities less than or equal to 850 HH/sq. mi. are considered rural. Then it is assumed that urban CBGs have higher placement costs than rural CBGs.

Using a model for determining support levels raises other issues. Models based on existing technologies of service levels will not anticipate costs as technologies and service levels evolve, and encourage service providers to build plant that may cost an absolute minimum amount, but which cannot be economically expanded or enhanced to evolve with the service demands of subscribers.

The point of this comment is not to diminish the efforts of the BCM authors, but rather to demonstrate that it is hard for even a well-conceived model to work for diverse and challenging areas. Rural America is diverse and challenging.

Extension of the Universal Service Fund Cap

Concerning paragraph 40 of the Notice, RUS supports extending the Universal Service Fund cap beyond the July 1, 1996, deadline until completion of the Joint Board's and Commission's deliberations on this matter. Removal of the cap during the formulation of new, and analysis of existing, mechanisms may distort current Universal Service Fund allocations and prevent accurate comparisons of new mechanisms to today's mechanisms.

Not extending this cap would fail prong 5 of the RUS Test because it would do harm to the existing mechanism.

Elimination of the 25 Percent Gross Allocator

While elimination of the 25 percent allocator as discussed in paragraph 114 may provide a more competitive environment among interexchange carriers due to decreased common line access rates, it is uncertain that the result (lower toll rates for subscribers) would be sufficient to offset increasing local service rates. Consideration of any support elimination should be consistent with the public interest. If the 25 percent allocator factor is eliminated, a local exchange carrier could be forced to recover loop costs by significantly increasing local service rates. The average RUS borrower in 1994 only collected 24% of total revenues from local service rates. Small changes in settlements will mean large changes in local service rates. Before eliminating the gross allocator, the Commission should ensure that future support mechanisms are targeted to offset potential increases in subscriber line charges.

The RUS Test applied to this change illustrates the effect. This issue would hurt chances for competition in rural America, so it fails prong 1. The revenue shortfall that would result would cause it to fail prong 4, affordability of service. This revenue shortfall would eventually be translated into infrastructure deterioration and an eligible telecommunications carriers possible inability to replace it, so it fails prongs 3 and 2. And the harm it would do to the existing level of universal service provided would cause it to fail prong number 5.

Recovery of Long Term Support Revenues

If long-term support (LTS) payments from large incumbent local exchange carriers are eliminated as suggested in paragraph 52, payments should continue to be made to the common line pools to prevent a shortfall of settlement revenues that would otherwise have been provided through increasing subscriber rates. The Act states that every telecommunications carrier that provides interstate telecommunications services shall contribute to the established mechanisms that preserve and advance universal service. It

is suggested, therefore, if changes are to be made to the LTS that the recovery of pooled settlement revenues could be made on a nondiscriminatory basis through a universal service support mechanism. A transition period to implement any change would be recommended.

The results of this change would be similar to the results of eliminating the 25% allocator, above. The results of the RUS test would be the same.

Carrier Performance Levels.

Gathering and disseminating information on the performance of the marketplace, as suggested in paragraph 69, might not seem to be a universal service issue per se, but it has implications for universal service.

By publishing performance data on all carriers, the Commission would not only enhance the competitive marketplace and provide yet another incentive for high performance, but it would also generate baseline performance levels against which all carriers could be measured. Eligible telecommunications carriers operating in areas where there is no competition could be held to average performance levels established in areas where competitive market forces are working. Eligible telecommunications carriers should be held to reasonable performance expectations, perhaps such as those received by a substantial majority of telecommunications subscribers. Consumers of telecommunications services should be able to base their choice of service provider on quality as well as cost. Few subscribers are capable of objectively evaluating telephone service.

Basic performance factors such as minimum voice bandwidth, reliability, noise levels and circuit loss, should be published. In addition, RUS believes that the Commission should gather cost of service information for use in determining cost comparability in rural areas.

These benchmarks should be set nationally so that universal service means the same thing everywhere, with some limited flexibility. Perhaps the least burdensome way to get this valuable information would be through a survey involving statistical sampling. If the Commission does not wish to disseminate this information, it could set the requirements for reporting and let others analyze and publish the information.

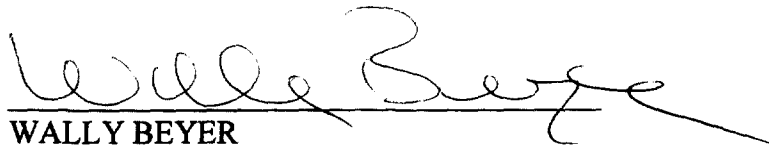
Applying the RUS Test to publishing carrier performance levels illustrates how important this could be. Publishing levels would encourage new entrants to serve an area which showed poor performance of existing providers. It would enhance competition everywhere because consumers would have information on which to base their choices. It would pass prong 1. Publishing levels would provide benchmarks that would be invaluable to evaluating "like quality, type and performance," so it would pass prong 2. Publishing levels would highlight changes in infrastructure, so it would pass prong 3. Publishing levels would be neutral to affordability, and would do no harm.

Conclusion

Creating a test like the RUS Test allows principled decision making on most issues. RUS suggests that the Commission consider the RUS Test, or create a similar test, against which it can evaluate each decision made in this proceeding.

Thank you for the opportunity to comment.

Dated: April 12, 1996

A handwritten signature in cursive script, appearing to read "Wally Beyer", written over a horizontal line.

WALLY BEYER
Administrator
Rural Utilities Service